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EXAMINER	
BAREFORD, KATHERINE A	

ART UNIT	PAPER NUMBER
1762	

DATE MAILED: 08/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/699,915	WORM, JOACHIM	
	Examiner	Art Unit	
	Katherine A. Bareford	1762	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *22 June 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-27* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-4,7-13,16,17 and 20-27* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Claims 5&6, 14-15, and 18-19 are canceled

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. The amendment of June 22, 2006 has been received and entered.

With the amendment, claims 5-6, 14-15 and 18-19 are canceled, and claims 1-4, 7-13, 16-17 and 20-27 are pending for examination.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 1-4, 7-13, 16-17 and 20-27 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

In claim 1, part b) and in claim 9, part b), the temperature range is amended to be between "about" 50 degrees C and "about" 90 degrees C. The specification and claims as originally filed did not provide support for "about" in relation to the temperature range. See page 4, lines 21-22 of the specification. Therefore, the amendments contain

new matter, as no teaching or suggestion of the use of "about" is provided in relation to the temperature range.

In claim 7, lines 2-3 and in claim 16, lines 2-3, the temperature range is amended to be "about" 105 degrees C to "about" 145 degrees C. The specification and claims as originally filed did not provide support for "about" in relation to the temperature range. See page 4, lines 25-30 of the specification. Therefore, the amendments contain new matter, as no teaching or suggestion of the use of "about" is provided in relation to the temperature range.

In new claim 26, the claim requires that applying of the resin in step c) and applying of the stand in step e) is performed using a vibrating roller. The disclosure as originally filed did not provide support for this use of a vibrating roller. At page 9 of the specification, lines 1-4, it is taught that "to apply the coating by applying firstly resin on the not-completely hardened surface of plate 20 e.g. through doctor blading and subsequently by applying the sand which is rolled-in by means of, for example, a vibrating roller." In other words the sand is rolled in through a vibrating roller only. It is not taught that the resin is applied with this roller or that the sand is applied with the roller. Therefore, the amendment contains new matter.

4. Claim 24 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it

pertains, or with which it is most nearly connected, to make and/or use the invention.

Claim 24 requires applying the mixture of resin and sand by "doctor blading using a doctor blade pan". Page 8, lines 24-25 of the specification also teaches application of the coating compound "by doctor blading with the help of a doctor blade pan". However, it is unclear to one of ordinary skill in the art from a reading of this phrase what is required by this phrase, as it is unclear what the doctor blade pan is meant to be and how it helps the application. As it is unclear what the blade pan is and how it is used it would require undue experimentation to attempt to use the process with this requirement.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 9, 11, 16, 17, 21, 25 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over EP 0 496 545 A2 (hereinafter '545) in view of Toth (US 4243696) and Van Dyck et al (US 3929545).

Claim 9: '545 teaches a method of continuous production of a glass fiber reinforced resin plate. Figures 5 and 7 and column 1, lines 5-10 and column 2, lines 20-

45. The formed plate can be coated with resin materials and filler. Column 2, lines 54-60 and column 6, lines 5-25. The method includes bonding of resin and glass fibers by heating to form a plate like base material. Column 4, lines 20-55. The base material is cooled after initial heating, forming a partially cured (or gelatinized) base material. Figures 5 and 7 and column 4, line 45 through column 5, line 20 (the heated material is removed from the first oven to a spot where the coating occurs, thus cooling will occur as the material passes through the unheated zone). The surface of the base material which is to be coated is not yet completely hardened. Column 6, lines 10-20. Then a mixture of resin material and filler can be applied to the not yet hardened top surface. Column 2, lines 54-60 and column 6, lines 15-25 and figure 5 (while applicant provides step c) applying the resin onto the top surface and step d) of applying sand on the top surface, as claimed the steps do not have to be performed in that order or separately, and therefore, the application of mixed material would provide the simultaneous performance of steps c) and d)). The applied materials can be rolled by roller 96. Figure 7, column 6, lines 50-55 and column 7, lines 10-25. The coated base material is then heated in an oven to fully cure the material. Column 6, lines 20-40. '545 teaches that well known filler particles can be silica, feldspar or glass bubbles. Column 6, lines 55-60.

Claim 16: the heating at step (f) can be to 240 to 300 degrees F, or 115 to 148 degrees C. Column 5, lines 35-50.

Claim 17: The base material can be initially covered by a film on the surface that is to be coated, and that film can be pulled off from the base material before the coating steps. Figure 1 and column 5, lines 1-10 and column 6, lines 5-15.

Claim 27: resin material can be applied as at step c) to the not yet hardened top surface alone. Column 6, lines 15-25. A second step of applying particulate material, such as silica, etc. can also be applied. Column 6, lines 50-60. The particulate material can be applied after the resin in a separate step as discussed at column 7, lines 15-25 (more than one of the steps can be carried out).

'545 teaches all the features of these claims except (1) that the specific filler and particulate materials are sand, (2) that the same type of resin is used in steps (a) and (c) (claim 11), (3) the cool down temperature (claim 9, 25), (4) the precise temperature of the heating step (claim 16), (5) that a film is not provided on the top surface during heating (claim 21), (6) that the applied coating has anti-slip properties (claim 9), and (7) and the cooling fluid to accelerate the cooling down process in step b) (claim 9).

However, Toth teaches that it is desirable to form non-slip coatings on various surfaces. Column 1, lines 5-25. Toth teaches that a surface is provided with an initial base coat of resin. Column 4, lines 30-50. Then a coating that is a mixture of particle and resin is applied to the surface. Column 3, lines 60-68 and column 4, line 60 through column 5, lines 25. The particles can be silica sand, for example. Column 5, lines 15-20. After application the resin particle mixture is heated to cure, and heating can occur in

an oven. Column 3, lines 55-68. As shown by Toth, the applied resin/sand mixture can be heated while uncovered. See figures 1C and 1D and column 3, lines 60-65.

Van Dyck teaches a process where a resin is applied to a substrate, then partially cured before further processing occurs in a continuous manufacturing process. Column 2, lines 30-45, column 6, lines 15-20 and column 7, lines 20-25. Van Dyck provides that after partial curing in an oven, the coated sheet can pass out of the oven and be subject to optional forced air cooling, before further processing occurs. Column 10, lines 35-55.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify '545 to (1) use sand as the filler or particulate material with an expectation of desirable coating and product results, because '545 teaches using filler or particulate material, and that such filler or particulate material can be silica, and it is well known that sand is primarily silica material. (2) It would further have been obvious to modify '545 to use the same type of resin in steps (a) and (c) with an expectation of desirable coating and product results, because '545 teaches that the resin of step (a) can be polyester or other resins (column 4, lines 5-15) and that the resin of step (c) can be selected from a variety of compounds (column 2, lines 55-60 and column 6, lines 15-20), and one of ordinary skill in the art would understand that the resins could be either the same of different based on the product desired given the wide ranges taught. (3) It would further have been obvious to perform routine experimentation to optimize '545 to find the optimum cool down temperature at which the resin/filler coating is applied given the teaching by '545 of using a range of

temperatures in the first oven and to control to provide only a partial cure, which would vary based on the resin material used (column 4, lines 30-55). (4) It would further have been obvious to perform routine experimentation to optimize '545 to select the optimum temperature of the curing in the second oven from the range given the teaching by ''545. (5) It would further have been obvious to modify '545 to heat the coated base material at step f) while uncovered by a carrier film as suggested by Toth with an expectation of desirable anti-slip results, because '545 teaches heating to cure and Toth teaches that a desirable method to heat to cure for antislip properties is without covering the article with a carrier film. (6) It further would have been obvious to modify '545 to use the resin/particle mixture to apply a coating with anti-slip properties as suggested by Toth with an expectation of providing a desirable coated surface, because '545 teaches a method of providing a desirable resin particle mixture on a surface, and Toth teaches that a resin particle mixture can be applied to a resin coated surface and then cured to provide desirable anti-slip properties on a surface. (7) It would further have been obvious to modify '545 in view of Toth to use forced air cooling as suggested by Van Dyck so as to provide a desirable and efficient coating process, because '545 in view of Toth teaches a process of partial curing an applied resin material on a base material and then further processing, and Van Dyck teaches that when providing partial curing of an applied resin material on a base material and then further processing it is well known that forced air cooling can be used before the next process steps.

7. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over '545 in view of Toth and Van Dyck as applied to claims 9, 11, 16, 17, 21, 25 and 27 above, and further in view of Holmes (US 4243719).

'545 in view of Toth and Van Dyck teaches all the features of this claim except that the vapors are drawn off.

However, Holmes teaches providing resin/glass laminates. Column 1, lines 1-10. When performing coating with a liquid resin material that is heated and cross linked in an oven to a temperature of 80 to 230 degrees C, Holmes teaches to provide for provision to vent or remove organic vapors thus produced. Column 8, line 25 through column 9, line 25.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify '545 in view of Toth and Van Dyck to draw off vapors which emerge during the process as suggested by Holmes to provide for removal of toxic fumes, because '545 in view of Toth and Van Dyck teaches a process whereby resins are applied and heated, and Holmes teaches that it is well known to remove organic vapors from heated resins in coating processes.

8. Claims 1-2, 4, 7-8, 13, 20 and 22-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over '545 in view of Toth and Van Dyck as applied to claims 9, 11, 16, 17, 21, 25 and 27 above, and further in view of Parker et al (US 3655823).

'545 in view of Toth and Van Dyck teaches all the features of this claim except the use of the peroxide radical donors as claimed. As to claim 1, '545 in view of Toth provides applying the mixture of resin and sand at the same time to the top surface, as discussed in the rejection above. The features of claims 2, 7, 8, 20 and 23 are provided as discussed above as with regard to claims 11, 16, 17, 21 and 25, respectively.

However, Parker teaches providing polyester resins that can be used as coatings on items such as flooring. Column 1, lines 10-15 and column 6, lines 5-20. Such resins are taught as being polymerized and curable by a free-radical mechanism where free radical catalysts are added and the materials heated to polymerize and cure. Column 5, lines 55-70. Conventional free radical catalysts can be used, such as organic peroxides. Column 5, lines 55-65. Parker teaches that the coatings can be applied to a substrate and then the coated article may be cured by adding peroxide to the coating. Column 6, lines 20-30.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify '545 in view of Toth and Van Dyck to use a peroxide curing agent as suggested by Parker and to apply the curing agent after the coating process at the point of heating so as to provide a desirable curing, because '545 in view of Toth and Van Dyck teaches a process whereby resins, such as polyester, are applied and heated to cure, and Parker teaches that when curing polyester resins coated on a substrate, it is well known to use a peroxide curing agent for improved curing and to provide the curing agent after the coating process occurs, and before the curing starts,

thus indicating that the curing agent can be added after coating and at any point up to the start of the curing. Since, as discussed in the rejection of claims 9, 11, 16, 17, 21 and 25 above, it would have been obvious to perform the heating and curing without the addition of the carrier film during heating and curing it would have been clear that there would be no problem adding the curing agent after the coating at the point of heating.

9. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over '545 in view of Toth, Van Dyck and Parker as applied to claims 1-2, 4, 7-8, 13, 20 and 22-23 above, and further in view of Holmes (US 4243719).

'545 in view of Toth, Van Dyck and Parker teaches all the features of this claim except that the vapors are drawn off.

However, Holmes teaches providing resin/glass laminates. Column 1, lines 1-10. When performing coating with a liquid resin material that is heated and cross linked in an oven to a temperature of 80 to 230 degrees C, Holmes teaches to provide for provision to vent or remove organic vapors thus produced. Column 8, line 25 through column 9, line 25.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify '545 in view of Toth, Van Dyck and Parker to draw off vapors which emerge during the process as suggested by Holmes to provide for removal of toxic fumes, because '545 in view of Toth, Van Dyck and Parker teaches a

process whereby resins are applied and heated, and Holmes teaches that it is well known to remove organic vapors from heated resins in coating processes.

10. Claims 9-11, 16, 21 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Benedict et al (US 5681612) in view of Toth (US 4243696) and Van Dyck et al (US 3929545).

Claim 9: Benedict teaches a method of continuous production of coated abrasive articles with abrasive particles adhered to polymeric binder that is fiber reinforced. Column 1, lines 15-30. The fiber reinforced article can be a glass fiber reinforced "plate" like belt. Column 1, lines 15-30, column 16, lines 25-40 and column 28, lines 10-25. The formed plate can be coated with abrasive particles and then resin material. Column 28, lines 15-35 and column 3, lines 1-25 and column 22, lines 15-25 (the size can be a curable resin). The method includes bonding of resin and glass fibers by heating to form a plate like base material. Column 28, lines 10-20 and column 35, lines 1-10. The base material can be cooled after initial heating, forming a partially cured (or gelatinized) base material. Column 35, lines 1-15 (the heated material is removed from the first oven to a spot where the particle coating occurs, thus cooling will occur as the material passes through the unheated zone). The surface of the base material which is to be coated is not yet completely hardened. Column 35, lines 1-15 (particle cured). Then abrasive particles can be applied to the not yet hardened top surface. Column 28, lines 15-25 and column 35, lines 1-25. Then resin size can be applied to the not yet hardened top

surface. Column 28, lines 20-30, column 35, lines 1-25 and column 22, lines 15-25. Note that the size can be provided by a roller coater over the particles, which will result in some rolling in of the particles. See column 30, lines 25-40 and figure 13. The coated base material is then heated in an oven to fully cure the material. Column 28, lines 25-35 and column 38, lines 1-25. Benedict teaches that various abrasive materials can be used, including aluminum oxide, silicon carbide, etc. Column 6, lines 55-60. As an abrasive article is formed it will be "anti-slip" in nature due to its roughness. Column 1, lines 15-30.

Claim 10: the sequence of steps can be d) before c) as discussed above as discussed above.

Claim 11: the size resin is desired to be compatible with the binder resin used to form the resin plate and can be the same material column 22, lines 20-30.

Claim 16: the heating at step (f) can be using an oven at about 75-150 degrees C. Column 32, lines 10-25.

Claim 21: the coated base material can be uncovered during heating. Figure 13 and column 30, lines 15-45.

Benedict teaches all the features of these claims except (1) that the specific filler and particulate materials are sand, (2) that step e) follows step c) (claim 10), (3)the cool down temperature (claim 9, 25), (4) the precise temperature of the heating step (claim 16) and (5) using a cooling fluid to accelerate the cooling down process in step b) (claim 9).

However, Toth teaches that it is desirable to form non-slip coatings on various surfaces. Column 1, lines 5-25. Toth teaches that a surface is provided with an initial base coat of resin. Column 4, lines 30-50. Then a coating that is a mixture of particle and resin is applied to the surface. Column 3, lines 60-68 and column 4, line 60 through column 5, lines 25. The particles can be silicon carbide, silica sand, etc. for example. Column 5, lines 15-20. After application the resin particle mixture is heated to cure, and heating can occur in an oven. Column 3, lines 55-68. As shown by Toth, the applied resin/sand mixture can be heated while uncovered. See figures 1C and 1D and column 3, lines 60-65.

Van Dyck teaches a process where a resin is applied to a substrate, then partially cured before further processing occurs in a continuous manufacturing process. Column 2, lines 30-45, column 6, lines 15-20 and column 7, lines 20-25. Van Dyck provides that after partial curing in an oven, the coated sheet can pass out of the oven and be subject to optional forced air cooling, before further processing occurs. Column 10, lines 35-55.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Benedict to (1) use sand as the filler or particulate material as suggested by Toth with an expectation of desirable coating and product results, because Benedict teaches using particulate material to form a rough abrasive article, and that such filler can be silicon carbide or aluminum oxide, and Toth teaches that a particulate material used to make a resin/particle rough coating would be silicon carbide or silica sand. (2) It would further have been obvious to modify Benedict to

provide step e) after step c) with an expectation of desirable coating results, because Benedict teaches that the resin of step c) can be applied by roll coating, and one of ordinary skill in the art would understand that the resin would normally impact the substrate before the roll, due to the thickness of the coating, and thus provide the rolling after the resin application. (3) It would further have been obvious to perform routine experimentation to optimize Benedict to find the optimum cool down temperature at which the resin/filler coating is applied given the teaching by Benedict of using a heated first oven and to control to provide only a partial cure (column 35, lines 1-25), which would vary based on the resin material used. (4) It would further have been obvious to perform routine experimentation to optimize Benedict to select the optimum temperature of the curing in the second oven from the range given the teaching by Benedict for curing. (5) It would further have been obvious to modify Benedict in view of Toth to use forced air cooling as suggested by Van Dyck so as to provide a desirable and efficient coating process, because Benedict in view of Toth teaches a process of partial curing an applied resin material on a base material and then further processing, and Van Dyck teaches that when providing partial curing of an applied resin material on a base material and then further processing it is well known that forced air cooling can be used before the next process steps.

11. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Benedict in view of Toth and Van Dyck as applied to claims 9-11, 16, 21 and 25 above, and further in view of Holmes (US 4243719).

Benedict in view of Toth and Van Dyck teaches all the features of this claim except that the vapors are drawn off.

However, Holmes teaches providing resin/glass laminates. Column 1, lines 1-10. When performing coating with a liquid resin material that is heated and cross linked in an oven to a temperature of 80 to 230 degrees C, Holmes teaches to provide for provision to vent or remove organic vapors thus produced. Column 8, line 25 through column 9, line 25.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Benedict in view of Toth and Van Dyck to draw off vapors which emerge during the process as suggested by Holmes to provide for removal of toxic fumes, because Benedict in view of Toth and Van Dyck teaches a process whereby resins are applied and heated, and Holmes teaches that it is well known to remove organic vapors from heated resins in coating processes.

12. Claims 13 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Benedict in view of Toth and Van Dyck as applied to claims 9-11, 16, 21 and 25 above, and further in view of Parker et al (US 3655823).

Benedict in view of Toth and Van Dyck teaches all the features of this claim except the use of the peroxide radical donors as claimed. Benedict does teach that the thermosetting resins from which the binder can be prepared includes polyester resins and that the size resin can be the same as the binder resin. Column 10, lines 10-15 and column 22, lines 15-30.

However, Parker teaches providing polyester resins that can be used as coatings on items such as flooring. Column 1, lines 10-15 and column 6, lines 5-20. Such resins are taught as being polymerized and curable by a free-radical mechanism where free radical catalysts are added and the materials heated to polymerize and cure. Column 5, lines 55-70. Conventional free radical catalysts can be used, such as organic peroxides. Column 5, lines 55-65. Parker teaches that the coatings can be applied to a substrate and then the coated article may be cured by adding peroxide to the coating. Column 6, lines 20-30.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Benedict in view of Toth and Van Dyck to use a peroxide curing agent as suggested by Parker and to apply the curing agent after the coating process at the point of heating so as to provide a desirable curing, because Benedict in view of Toth and Van Dyck teaches a process whereby resins, such as polyester, are applied and heated to cure, and Parker teaches that when curing polyester resins coated on a substrate, it is well known to use a peroxide curing agent for improved curing and to provide the curing agent after the coating process occurs, and before the curing

starts, thus indicating that the curing agent can be added after coating and at any point up to the start of the curing.

13. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Benedict in view of Toth and Van Dyck as applied to claims 9-11, 16, 21 and 25 above, and further in view of EP 0 496 545 A2 (hereinafter '545).

Benedict in view of Toth and and Van Dyck teaches all the features of this claim except using a using a film on the substrate during step b) and removing it before steps d) and c).

However, '545 teaches a method of continuous production of a glass fiber reinforced resin plate. Figures 5 and 7 and column 1, lines 5-10 and column 2, lines 20-45. The plate can be coated with resin materials and filler. Column 2, lines 54-60 and column 3, lines 5-10 and column 7, lines 15-25. The method includes bonding of resin and glass fibers by heating to form a plate like base material. Column 4, lines 20-55. The base material is cooled after initial heating, forming a partially cured (or gelatinized) base material. Figures 5 and 7 and column 4, line 45 through column 5, line 20 (the heated material is removed from the first oven to a spot where the coating occurs, thus cooling will occur as the material passes through the unheated zone). The surface of the base material which is to be coated is not yet completely hardened. Column 6, lines 10-20. Then a resin material can be applied to the not yet hardened top surface. Column 2, lines 54-60 and column 6, lines 15-25. Also, particles, such as silica, can be applied to

the not yet hardened surface. Column 7, lines 15-25 and column 6, lines 40-60. The applied particles can be rolled into the curable layer. Figure 7 and column 6, lines 50-55. The coated base material is then heated in an oven to fully cure the material. Column 7, lines 1-15. The base material can be initially covered by a film on the surface that is to be coated, and that film can be pulled off from the base material before the coating steps. Figure 1 and column 5, lines 1-10 and column 6, lines 5-15.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Benedict in view of Toth and Van Dyck to use a film on the resin/reinforcing material during the initial curing and cooling of step b) so as to provide a desirable base reinforcing material/resin, because Benedict in view of Toth and Van Dyck teaches a process of partial curing an applied resin material on a base reinforcing material and then further coating processing, and '545 teaches that when forming a resin/reinforcing material to be further coated and processed, it is known to provide the initial curing/cooling of the material while it is covered with a carrier film.

Response to Arguments

14. Applicant's arguments filed June 22, 2006 have been fully considered but they are not persuasive.

(A) As to the 35 USC 103 rejections using '545 in view of Toth and Van Dyck, applicant argues that '545 does not teach a particular cooling as is now claimed, to a particular temperature range that matches characteristics of the resins used in the

herein described process. As to Toth, applicant argues that it describes a method and apparatus for making non-slip floorings where a base coat of resin is supplied and resin/particle mixture is applied, but according to applicant, it does not refer to an in-line method and does not focus on the problems of in-line production, and one of skill in the art could not transcribe the method of Toth to the in-line method of '545 for the particular problems that occur during the process. As to claim 16, applicant argues that this provides a particular desirable heating temperature. As to claim 17, applicant notes that the carrier film is pulled of just before steps c) and d) which implicitly teaches that emission of vapors may occur occur in the cooling down section between point 19 and the oven and therefore the area of vapor is clearly defined unlike in '545 in view of Toth. As to claim 12, applicant notes that the claims depicts drawing off vapors in a specific section unlike the general drawing off of vapors. As to claim 15 using Van Dyck (now in claim 9), applicant notes that Van Dyck does not discuss the use of carrier films or the like and the specific demands related to the use of carrier films s not relevant and Van Dyck also does not teach the specific temperatures or ranges and therefore, one would not use Van Dyck as a base in order to optimize a method of in-line manufacturing as claimed. As to the further rejection of claims 1+, further using Parker, applicant takes the position that '545 and Toth do not provide the teachings as discussed above, and Parker does not cure these deficiencies and further does not teach adding the radicals after curing has already started. Applicant also argues that Parker discusses a typical chemical invention using chemical language and it cannot be

supposed that a person skilled in the art of engineering methods for in-line methods and apparatuses for manufacturing glass-fiber composites would base his considerations on a chemical patent.

The Examiner has reviewed these arguments, however, the rejection is maintained. As to the cooling of '545, while it does not teach a particular cooling, it does teach to apply the material to a partially cured article and taking the material out of the oven for the extra addition of materials. One of ordinary skill in the art would not want curing to continue beyond the desired state and thus rapid cooling to a desired condition would be suggested as shown by Van Dyck. The Examiner has taken the position that it would have been obvious to perform routine experimentation to determine the optimum cool down temperature given the range of temperatures in the first oven and the desire to control to provide only a partial cure, which would vary based on the resin material used. Applicant has provided a range of temperatures, but as shown no criticality of these temperatures. For example, there is no claim to using any particular resin at these temperatures and no showing of bad results outside the claimed range. As to Toth, it is the Examiner's view that Toth does appear to show an in-line method, since as described the system is moving through a series of stations that coat, heat and treat as shown by the drawings and the description at columns 3 and 4. Even if it is not in-line, it is a process of steps replicating the order provided by '545 as discussed in the rejection above as to the teachings of Toth and '545. As to the claim 16 temperature, this overlaps that taught by '545. As to the claim 17 pulling off of the

carrier film, the steps required by claim 17 are taught by '545 as discussed. Specific benefits as to the vapors, etc. do not change the requirements of the claim. As to the removal of the vapor in claim 12, the benefits as to this aspect are provided by Holmes as discussed in the rejection above. As to the use of Van Dyck, the Examiner has provided the reference as to the well known use of forced air cooling after partial curing before further processing occurs. While Van Dyck does not provide all the features of the claims, '545 are provided as to these features. As to the further use of Parker, it is the Examiner's position that it would have been obvious for someone performing a chemical process, such as adding radical donors in order to perform cross linking, to look at art that discusses such a process. As to adding the radical donors after the curing started, it is noted that a further resin has been supplied which also has to cross link and cure.

(B) As to the 35 USC 103 rejections using Benedict in view of Toth and Van Dyck, applicant argues that Benedict is not relevant as it is directed to piece by piece methods of forming flexible belts that do not have anti-slip properties, rather abrasive properties. Applicant argues that anti-slip does not mean abrasive. Furthermore, the belts taught by Benedict are not plates, which require a particular stiffness.

The Examiner has reviewed these arguments, however, the rejection is maintained. As to in-line methods vs. piece-by-piece methods, the Examiner notes that there is no functional difference as required by the claims. The claims merely require that specific steps be provided, which are provided as noted by Benedict as well. As to

the anti-slip properties of the belt, while anti-slip materials may not be abrasive, the roughened surface of Benedict forms a structurally anti-slip surface due to its roughness. As to the requirement of "plates", Benedict structurally forms a "plate" surface of a sheet of fiberglass reinforced material that is coated. Applicant's claims and specification provides no limitation on plate in regard to its stiffness, and therefore the plain meaning of the term is used. As shown by the drawings, the present plate material is flexible enough to be rolled. Therefore, Benedict provides all the structural features required by the claims.

(C) As to the new claims 23, 24, 25, 26 and 27, applicant argues 23 and 25 provide the most advantageous cooling down temperature. Claim 24 and 26 involve application methods. Claim 27 requires the steps of claim 9 be performed in a separate and sequential method.

As to claims 23 and 25 they have been rejected as discussed above, and at to the specific temperature used, as discussed, applicant as not shown criticality of this temperature beyond routine experimentation. As to claim 27, this is rejected as discussed in the rejection above as '545 teaches that the different embodiments can be used together in a series. As to claims 24 and 26, they are rejected as discussed under 35 USC 112 above.

Conclusion

15. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Katherine A. Bareford whose telephone number is (571) 272-1413. The examiner can normally be reached on M-F(6:00-3:30) with the First Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Meeks can be reached on (571) 272-1423. The fax phone numbers for the organization where this application or proceeding is assigned are (571) 273-8300 for regular communications and for After Final communications.

Other inquiries can be directed to the Tech Center 1700 telephone number at (571) 272-1700.

Furthermore, information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

KATHERINE BAREFORD
PRIMARY EXAMINER